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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/659,900	09/11/2003	Xinggao Fang	5668	4186

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EXAMINER

GREEN, ANTHONY J

ART UNIT	PAPER NUMBER
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1755

DATE MAILED: 12/22/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/659,900

Applicant(s)

FANG ET AL.

Examiner

Anthony J. Green

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-6 and 8-22 is/are rejected.
- 7) ☒ Claim(s) 7 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 01/16/04.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 3, 6 and 10 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 3 the phrase "acrylic amides oligomers" is not understood. Is it supposed to be -- acrylic amides, oligomers --? Clarification is requested.

In claim 6 it is unclear as to the difference between the 2 following compounds:

-(1)(meth)acrylate-containing compounds

-(2) methacrylate-containing compounds. The examiner is unclear as to what the difference is between these 2 compounds as they appear to be one and the same. Clarification is requested.

In claim 10 it is unclear as to why applicant uses the terms "ratio(s)" and "range(s)? Is applicant intending this to mean that 2 components may be made up of one compound as taught by the specification on page 5? Clarification is requested.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

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A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 1-3, 8, 10-18, and 21-22 are rejected under 35 U.S.C. 102(b) as being anticipated by Bullock et al (US Patent No. 6,251,210).

The reference teaches in the table found in column 19 a composition that appears to encompass that which is instantly claimed. That is, it is the position of the examiner that the fluorochemical compound meets applicants repellent and soil release component as the types of fluorochemical useable include those that provide water repellency and stain resistance (see column 12, lines 7+) and since both can be fluorochemicals. Note that applicant recites in the instant specification "In some applications, a given chemical component may serve as a hydrophilic resin and a soil release component" (page 5 of the specification) which suggests that one component may serve as 2 separate components. The acrylic thickener appears to encompass the hydrophilic resin as column 13, lines 30+ recite that the thickeners are water soluble. The use of a crosslinker is clearly taught and includes various melamine/formaldehyde resins. See also Table 2 recited on page 15. which teaches an example of a composition useable. With respect to claim 10 since one compound meets 2 components it is believed that only 3 ratios would be present and these amounts are

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encompassed by the amounts of the reference absent evidence showing otherwise. As for the properties, these properties are considered inherent since the composition is the same absent evidence showing otherwise. Accordingly the instant claims are met by the reference.

5. Claims 1-4, 6, and 8-22 are rejected under 35 U.S.C. 102(e) as being anticipated by Kimbrell, Jr et al. (US Patent Application Publication NO. 2004/0138083).

The applied reference has a common inventor with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 102(e) might be overcome either by a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not the invention "by another," or by an appropriate showing under 37 CFR 1.131.

The reference teaches, in the claims, a composition for imparting durable repellency and stain release to a substrate (such as a textile), said composition comprising the resultant product of at least one hydrophilic stain release agent, at least one hydrophobic stain repellency agent crosslinked by at least one hydrophobic cross-linking agent. Claim 5 teaches that the hydrophilic stain release agent may be polyesters, polyvinyl alcohol polymers, cellulose derivatives etc. See also the examples which recite other components useable in the invention.

The instant claims appear to be taught by the reference. It is the position of the examiner that the hydrophilic stain release agent meets applicants hydrophilic resin

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component and soil release agent as the agent is hydrophilic and may be a resin material (see claim 5 of the reference) and because it is a stain release agent. Note that applicant recites in the instant specification "In some applications, a given chemical component may serve as a hydrophilic resin and a soil release component" (page 5 of the specification) which suggests that one component may serve as 2 separate components. Also the reference teaches that various grades of REPEARL[®] may be used as the hydrophilic stain release agent (see especially the examples) and it is known in the art that REPEARL[®] is a perfluoroalkyl polyacrylate copolymer emulsion therefore the hydrophilic stain release agent may be a fluoroacrylate which meets instant claim 4 and 18. The use of a crosslinking component is clearly taught and includes various isocyanates (see especially claim 9 of the reference). With respect to claim 10 since one compound meets 2 components it is believed that only 3 ratios would be present and these amounts are encompassed by the amounts of the reference absent evidence showing otherwise. With respect to the addition of other additives, claim 11 of the reference teaches this feature. As for the properties, these properties are considered inherent since the composition is the same absent evidence showing otherwise. Accordingly the instant claims are met by the reference.

6. Claims 1-4, 6, and 8-22 are rejected under 35 U.S.C. 102(e) as being anticipated by Kimbrell, Jr et al. (US Patent Application Publication NO. 2004/0137154).

The applied reference has a common inventor with the instant application.

Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art

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under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 102(e) might be overcome either by a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not the invention "by another," or by an appropriate showing under 37 CFR 1.131.

The reference teaches, in the examples, a composition for imparting durable repellency and stain release to a substrate (such as a textile), said composition comprising at least one hydrophilic stain release agent, at least one hydrophobic stain repellency agent crosslinked by at least one hydrophobic cross-linking agent. See also the examples which recite other components useable in the invention.

The instant claims appear to be taught by the reference. It is the position of the examiner that the hydrophilic stain release agent meets applicants hydrophilic resin component and soil release agent as the agent is hydrophilic and may be a resin material (see paragraph [0051] of the reference) and because it is a stain release agent. Note that applicant recites in the instant specification "In some applications, a given chemical component may serve as a hydrophilic resin and a soil release component" (page 5 of the specification) which suggests that one component may serve as 2 separate components. Also the reference teaches that various grades of REPEARL[®] may be used as the hydrophilic stain release agent (see the examples) and it is known in the art that REPEARL[®] is a perfluoroalkyl polyacrylate copolymer emulsion therefore the hydrophilic stain release agent may be a fluoroacrylate which meets instant claim 4 and 18. The use of a crosslinking component is clearly taught and includes various isocyanates (see especially claim 9 of the reference). With respect to claim 10 since

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one compound meets 2 components it is believed that only 3 ratios would be present and these amounts are encompassed by the amounts of the reference absent evidence showing otherwise. As for the properties, these properties are considered inherent since the composition is the same absent evidence showing otherwise. Accordingly the instant claims are met by the reference.

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 1-6, 8, 10-18 and 21-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Xiao et al (US Patent No. 5,747,392).

The reference teaches a composition useful for preparing water repellant, stain resistant, weatherable and transfer printable coated fabrics using a composition comprising a polyurethane latex, an acrylic latex, a fluorochemical and other additives such as fungicides, a crosslinking agent, a fire retarding agent, thickeners etc. (see column 11, lines 47+). Lines 29+ of column 10, recite the types of crosslinking components and states that other crosslinkable resins such as mixtures of polyacrylic acid and polyols, e.g. polyvinyl alcohol may be added. According to column 12, lines 55+ thickeners such as water soluble high molecular weight natural and synthetic materials such as copolymers of acrylic acid with methyl acrylate, polyvinyl alcohol etc

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may be added as thickeners. According to lines 12+ of column 13, the thickener solids are water soluble in the amounts used. Column 10, lines 11+, teaches that types of fluorochemicals that may be used and states that they provide both water and stain resistance.

The instant claims are obvious over the reference. While the reference does not specifically recite a composition comprising all of the recited components, it does teach that one may be formulated. It is the position of the examiner that the fluorochemical component of the reference meets both the repellent and soil release component of the reference as the claims recite that the repellent component may be a fluorochemical (claims 2-3, 18 and 22) whereas claims 18 and 22 recite that the soil release component is also a fluorochemical. With respect to claims 4 and 5 since a fluoroacrylate is an example of a fluorochemical it would have been obvious for one of ordinary skill in the art to utilize any well known fluorochemical such as a fluoroacrylate alone or further comprising an ester as the fluorochemical absent evidence to the contrary without producing any unexpected results absent evidence showing otherwise. As for the hydrophilic resin, it is the position that the references use of thickeners comprising water soluble high molecular weight natural and synthetic materials such as copolymers of acrylic acid with methyl acrylate, polyvinyl alcohol etc meets the hydrophilic resin component recited in the independent claims and also dependent claim 6. Furthermore the reference teaches that other crosslinkable resins such as polyvinyl alcohol may be added which is the same type recited in instant claim 6. As for the crosslinking agent, the reference teaches that one may added and includes various

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melamine/formaldehyde resins and their variants thus rendering obvious dependent claim 8. The amounts recited by the reference encompass the amounts instantly claimed. As for the additive components of instant claim 13 some of these are suggested as optional components (see column 9, lines 59+ and the examples). While the reference does not specifically recite that the composition possesses the same properties, it is the position of the examiner that since the use of the same components is suggested, the treated textile of the reference would obviously possess the same properties.

9. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Bullock et al (US Patent No. 6,251,210).

The reference was discussed above.

The instant claim is obvious over the reference. While the reference does not specifically provide an example using the instantly claimed resins, it does teach that polyvinyl alcohols etc. are useable as the thickeners and accordingly the use of polyvinyl alcohol is believed to be obvious over the reference.

Double Patenting

10. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

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A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

11. It is noted that there is a common inventor and accordingly it is the position of the examiner that obviousness-type double patent rejections are proper.

12. Claims 1-4, 6, and 8-22 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-17 of copending Application No. 10/340,300 (US Patent Application Publication No. US 2004/0138083 A1). Although the conflicting claims are not identical, they are not patentably distinct from each other because the reduction to practice of the claims of the copending application would render obvious the instant claims.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

The claims of the copending application are of a broader scope than the instant claims and as such they are seen to render obvious the instant claims. See also the above 102 (e) rejection for more details.

13. Claims 1 and 11-14 provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-2, 7 and 13 of copending Application No. 10/339,840 (US Patent Application Publication No. US 2004/0137154 A1). Although the conflicting claims are not identical, they are not

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patentably distinct from each other because the reduction to practice of the claims of the copending application would render obvious the instant claims.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

The claims of the copending application are of a broader scope than the instant claims and as such they are seen to render obvious the instant claims. See also the above 102 (e) rejection for more details.

Allowable Subject Matter

14. Claim 7 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Information Disclosure Statement

15. The references have been considered and with the exception of Reference AF used above, are not seen to teach and/or fairly suggest the instant invention.

References Cited By The Examiner

16. The REPEARL[®] reference is cited to show that the composition of REPEARL[®] is well known in the art.

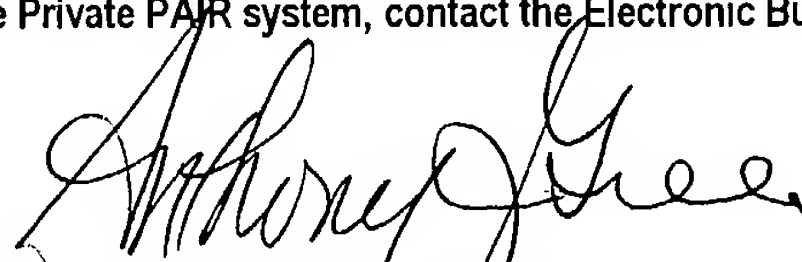
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Anthony J.

Green whose telephone number is 571-272-1367. The examiner can normally be reached on Monday-Thursday 6:30-4:00.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mark L. Bell can be reached on 571-272-1362. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Anthony J. Green
Primary Examiner
Art Unit 1755

ajg
December 10, 2004